

NEW HORSEFLIES (TABANIDÆ, DIPTERA) FROM
THE SOUTHWESTERN UNITED STATES

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A new variety of *Tabanus tetricus* Mart. (syn. *hirtulus* Big.) from southern Colorado and Arizona, and one new *Tabanus* s. str. from Arizona are herewith described. The red on the sides of both sexes of the first is so extensive as to suggest relationship to the *affinis* group, and more pronounced than any seen in a long series of typical *tetricus* from Montana and other northern localities. Until the male was associated, it was thought to be distinct, but I suspect that complete intergradation will eventually be found and the present name is offered to call attention to this extreme variation which would otherwise confuse assignment of individual specimens or small series from the region.

My reasons for considering *tetricus* and *hirtulus* synonymous, in spite of the respective difference of denudation and pollinosity of the subcallus, are given elsewhere (1935, 1936); the present variety is closer structurally to *hirtulus* but tinctorially to *tetricus*. Type material, unless otherwise mentioned, is in the collection of the author.

Tabanus tetricus rubrilatus Philip, n. var.

Antennæ dark red basally, black distad of the low prominence on the third segment; latter in ♀ chunky, rather wide, hardly excised, annulate portion short. Second palpal joints (♀) pale, creamy, strongly incrassate basally and tapering rapidly to a point. Ante-alar tubercles reddish. Abdomen dark reddish laterally with a broad, black irregular interval inclosing a row of pale discontinuous triangles, largest on the second segment, and an equivalent row of pale dashes superimposed on the red on either side, composed mostly of pale hairs. Wings hyaline, the costal and 1st M cells tinged with dilute yellowish, a pronounced spur on the "fork" of vein R5.

Female. Length 15 mm. Eyes hairy, with four green bands on a purple ground (relaxed). Front about three times as high as basal width, distinctly convergent, grayish pollinose with short

black hairs; callosity black, subquadrate, occupying full width of front and narrowly joined to a linear extension scarcely half the height of the front; ocelligerous tubercle small but distinctly brownish. Subcallus and face dark gray pollinose, the latter heavily pale pilose. Third antennal joint 1.14 mm. in total length by 0.5 basal breadth, the annuli 0.54 mm. Palpi about three quarters the length of the stylets, with many pale, and a few black hairs, 1.05 x 0.6 mm. in length and maximum thickness. Thorax dull black, with the usual gray lines; pleuræ smoky. Legs with all femora, the fore tibiæ distally and fore tarsi blackish, remainder dull red, darkening distally. Abdominal dorsal incisures pale-haired, interrupted narrowly by black on either side of the bases of the median triangles only. Red extending onto sides of first tergite, one-half or less its width, fading posteriorly on the fourth and fifth segments. Venter dull reddish covered with appressed yellowish hairs, darker distally.

Male, 15 mm. Differs from the ♀ in the usual sexual characters, the third antennal joint more slender and a little more excavated, 0.36 x 1.14 mm. in breadth and length, the annuli 0.54; the terminal palpal segments pale yellowish, subovoid, 0.48 x 0.9 mm. without the apical nipple of *T. hirtulus* allotype (Philip, 1936). Thorax blackish, the gray lines evanescent anteriorly. Red on sides of abdomen extensive on tergites II and III encroaching on IV, almost crossing I laterally and involving the first four sternites almost completely; the lateral pale dashes evident but not as prominent as in the ♀, the black intervals on tergites II and III subquadrate, somewhat widened behind. Outer fore tarsal claws about a fourth longer than the inner.

Holotype ♀, southern Colo., Aug. 9, 1935, 9500 feet, C. B. Philip. Allotype ♂, Cornet Creek, Telluride, Colo., July 9, 1919, about 10,500 feet. Paratypes, 2 ♀, same data as holotype; 3 ♀, Greer, Arizona, 8000 feet, June 25, 1926, C. T. Vorhies; 1 ♀, White Mountains, Arizona, July 28, 1926, R. B. Streets; 2 ♀, Custer Co., Colo., Aug. 9, 1928, 9000 feet, R. H. Painter; 5 ♀, Conejos Canyon, Conejos Co., Colo., July 6 to Aug. 9, 1932, G. M. Kohls. In the collection of the U. S. Nat'l Museum, the University of Arizona at Tucson, Kansas State College at Manhattan, Ohio State Museum at Columbus, The Rocky Mountain Laboratory of the U. S. P. H. S., and the author.

The Conejos specimens are the least extreme with the antennæ and palpi a little less chunky than in the holotype. The abdomen has an orange-brownish cast on the sides of well preserved specimens due to the heavy vestiture of black hairs outside the triangles, but in one worn specimen from Custer Co.,

Colorado, the red appears more pinkish and extensive, connected across the incisures, the triangles almost obliterated.

Separated from confusable members of the *affinis* group by the lack of faint clouds on the wings or of intense costal and basal infuscation, the presence of a long stump-vein, and the incrassate, more sharply pointed pale palpi.

Tabanus eurycerus Philip, n. sp.¹

So closely resembles *T. laticornis* Hine as not to have been suspected until the males appeared. The eyes are glabrous, pattern (relaxed) two green bands on a purple ground (in male confined to area of small facets); antennæ bright red, annuli black, first joint a little swollen, third as wide as long, subrectangulate and slightly excised above, strongly bowed below; wings including the costal cell hyaline, "fork" of R5 not appendiculate.

Female. Length 13.5 mm. Front a little over four times as high as the width of the callosity, convergent below, gray, the black, subquadrate callosity occupying its full width, except for a narrow line on either side, not normally joined to the spindle-shaped median callosity above. Subcallus, face and cheeks grayish pollinose and latter thickly covered with white pile. Palpi elongate, attenuated sharply and strongly incrassate basally on the second joint, pale creamy, many white and a few scattered black hairs. Disc of thorax dark gray with five paler lines covered with long gray pile and scattering, short, appressed rufous hairs (yellowish in *laticornis*). Antealar tubercles reddish, pleuræ gray pollinose and whitish pilose, tufts of white pile above the base of the wings. Legs dark, the fore tibiæ basally and the middle and hind tibiæ except at tips reddish. Abdomen reddish on the first three segments, superimposed by oblique whitish pilose spots, the rather broad black interval inclosing a median row of slender pale triangles widened abruptly on the posterior incisures. Venter reddish, darker from the fourth sternite caudally.

Male, 14 mm. Except for the usual sexual differences and a strongly attenuated abdomen, rather closely resembles the female. Area of enlarged facets strongly developed occupying a little less than three-quarters of the total area. Palpi yellowish, rather small, scarcely one and a half times as long as thick; very few black hairs. Abdomen dusty, pale brownish, the oblique lateral dashes accentuated much as the pattern seen in the males of *T. hirtulus*.

¹ Gr., broad horned.

Holotype, female, Santa Rita Mts., Ariz., 5 to 8000 feet, July. F. H. Snow. Allotype, male, southern Ariz. Aug., 1902. F. H. Snow. Both from the late Professor Hine as *T. laticornis* Hine. Paratypes, 1 ♂, Santa Rita Mts., Ariz., June 12, 1933. R. H. Beamer; in the Univ. of Kansas collection. One ♀ same locality, June 15, 1924, C. T. Vorhies in the Univ. of Arizona collection. One of each sex Chiricahua Mts., Ariz., 6200 feet, June 20, 1928, A. A. Nichol.

The bare eyes and hyaline costal cells of the wings will at once distinguish this from *T. laticornis* Hine.

REFERENCES

- Philip, C. B., 1935. Comments on Marten's species of Tabanidæ (Horseflies) from western United States. Can. Ent. 67:93.
....., 1936. *Tabanus rhombicus* and related Western Horseflies. Can. Ent. 68:155.

A NEW SPECIES OF DENDROPHILUS FROM CALIFORNIA

(Coleoptera, Histeridæ)

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Dendrophilus tularensis Ross, new species

Elongate oval, brownish piceous, surface dull, alutaceous. Head finely closely punctate, punctures separated by a space less than their width. Pronotum feebly convex; surface uniformly punctate, punctures large, interspaces as wide as their diameter; sides more finely and closely punctate, somewhat coarser along base. Elytra densely subevenly punctate over entire surface, punctures distinct deeply impressed, generally separated by spaces less than their width; inflexed portion very coarsely punctate, unistriate, stria confused medially; humeral stria deeply impressed, entire, carinate along outer edge; inner humeral feeble, short, medial; oblique humeral distinct, almost joining base of inner humeral; all dorsal striæ deeply impressed and broad at basal half, becoming weaker approaching apex and finally lost in the punctures at apical fifth; first dorsal longest, only slightly abbreviated at apex, others decreasing gradually in length from outer to inner; sutural stria as long as first dorsal and equally impressed. Pygidium coarsely punctate medially, punctures separated by half their own diameter; punctures at apex very fine and close. Punctures of metasternum very large and moderately close at coxal angles, becoming smaller and sparser medially, interspaces with occasional still finer punctures. Length 3.5 mm., width 2.25 mm.